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**From:** Obrecht, Eric R (DEC) [eric.obrecht@dec.ny.gov]  
**Sent:** 8/21/2017 8:03:48 PM  
**To:** Garbarini, Doug [Garbarini.Doug@epa.gov]  
**CC:** Schick, Robert (DEC) [robert.schick@dec.ny.gov]; Ryan, Michael (DEC) [michael.ryan@dec.ny.gov]; Rice, Timothy B (DEC) [timothy.rice@dec.ny.gov]  
**Subject:** FW: Grumman

Doug,

Below in the text of the letter are the edits in red and blue and stricken out.

As Bob indicated he will try to get a response from Exec this week on any remaining issues.

Eric

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**From:** Obrecht, Eric R (DEC)  
**Sent:** Thursday, August 03, 2017 3:13 PM  
**To:** Schick, Robert (DEC) <robert.schick@dec.ny.gov>; Ryan, Michael (DEC) <michael.ryan@dec.ny.gov>  
**Cc:** Rice, Timothy B (DEC) <timothy.rice@dec.ny.gov>  
**Subject:** FW: Grumman

Below are Tim and my edits are below.

Two things:

- 1) In Doug's 4<sup>th</sup> paragraph 4<sup>th</sup> sentence he quotes Schumer's letter saying "...Northrup Grumman declined to provide to provide any details on its historical use, storage, or disposal of radiological materials at the Site." While that's Schumer take on the matter I don't know if we ever asked for the details in 2016.
- 2) The last sentence of the 5<sup>th</sup> paragraph states 10 landfills, because that's what was published in the press, it was actually 9 (see attached).

Let me know.

Eric

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**From:** Garbarini, Doug [mailto:Garbarini.Doug@epa.gov]  
**Sent:** Thursday, August 03, 2017 2:00 PM  
**To:** Obrecht, Eric R (DEC) <eric.obrecht@dec.ny.gov>  
**Cc:** Badalamenti, Salvatore <Badalamenti.Salvatore@epa.gov>; Thantu, Lorenzo <Thantu.Lorenzo@epa.gov>; Negrelli, Mike <Negrelli.Mike@epa.gov>; Schick, Robert (DEC) <robert.schick@dec.ny.gov>  
**Subject:** Grumman

Hi Eric

Below find a draft response to the Schumer letter. We expect something close to this will get circulated to the acting RA's office. I had indicated I would share some draft text with you, but I would appreciate it if you would keep this to those on this email string. You will likely be most interested in the last two paragraphs. If you have any concerns about them, let me know. I am not sure whether you have released any info regarding item 2 in the next to last para; if you have not we can modify that text. If you have any other results that have already been shared with other stakeholders, or more specific timeframes for the release of info related to the items in that paragraph that we can include in the letter please copy EPA folks on this email with that info.

I will be out for a couple of weeks after today.

Thanks

Doug

Thank you for your June 27, 2017 letter urging the U.S. Environmental Protection Agency (EPA) to use its technical expertise and resources to assist state and local officials to evaluate all potential present and historical sources of radioactive materials at the Northrop Grumman/US Naval Weapons Industrial Reserve Plant (the Site).

As you are aware, the New York State Department of Environmental Conservation (NYSDEC) has the lead regulatory role with respect to this Site. In our oversight role under the Resource Conservation and Recovery Act (RCRA), the EPA has been working closely with NYSDEC on cleanup activities at the Site. Several years ago, the EPA initiated quarterly review meetings with the key stakeholders at the Site with the goals of fostering improved coordination and communications, and expediting the Site cleanup. These meetings are attended by the EPA, NYSDEC, New York State Department of Health, the Navy, Northrop Grumman, Massapequa Water District, South Farmingdale Water District, Bethpage Water District (BWD), and Town of Hempstead Water Department. The shutdown of the BWD Well #4-1 due to low-level detection of radiological contamination has been a topic of discussion at the quarterly meetings. Consideration has been given as to whether the elevated radiological contamination in the groundwater is naturally occurring or related to operations at the Site or operations at other facilities in the area.

During 2015 coordination meetings, the participating water districts requested that additional sampling of the groundwater be performed for radium. Northrop Grumman performed the additional sampling of a series of wells in 2015; the results revealed a few locations where radium was slightly above the drinking water standard. However, the results did not reveal a specific source of the radium. It is important to note that although radium is only moderately soluble in water under certain geological conditions, it can enter the groundwater system by dissolution of minerals or aquifer sediment, desorption from the surface of particles within aquifers, and other processes. According to studies by United States Geologic Survey (USGS), detectable radium concentrations exist within the basic soils comprising the North Atlantic Coastal Plain, which includes Long Island. Studies in New Jersey by USGS in cooperation with the New Jersey Department of Environmental Protection during the 1990's indicated that the chemistry of the water

rather than the radium content of the sediment was primarily responsible for higher detections measured.

The water districts also requested that additional data be gathered to determine whether radiological materials were used at the Site during production years. As noted in your letter, in 2016, Northrop Grumman responded to NYSDEC request for information regarding the use of radiological materials at the Site with a nine-page report entitled, "Investigation of Radioactive Materials at Northrop Grumman's Bethpage Facility." In that report, Northrop Grumman states as a conclusion "In general, the use, handling and disposal of radiological materials at the site during the documented period were consistent with contemporaneous industry standards." However, as you also state in your letter, Northrop Grumman declined to provide any details on its historical use, storage, or disposal of radiological materials at the Site. The EPA agrees that a more definitive response should be sought from Northrop Grumman concerning its use, storage, or disposal of radiological materials at the Site.

The EPA has offered its assistance to NYSDEC with respect to the investigation of the radium in the groundwater (whether naturally occurring or resulting from operations) near the Site. The EPA staff representing the Superfund, RCRA, and radiation and drinking water programs have discussed the investigation of radium in the groundwater in the vicinity of the Site, as well as at the Bethpage High School Campus, potential sources of the radium, and the need for additional information from Northrop Grumman regarding its use of radioactive materials at the Site. NYSDEC is actively gathering information that can be used to better define the situation at the Site. NYSDEC has (1) requested additional information from Northrop Grumman related to past use of radiological materials at their Bethpage Facility (2) ~~tested for radiological contamination at~~ performed a radiation survey inside of the ~~Building~~ Plant 26 buildings on June 30, 2017 and found no evidence of any ~~radiological contamination~~ above background radiation levels except for the normally slightly elevated natural radiation emitted from one granite lab table ~~on one table that was made of graphite granite~~, (3) ~~performed radon sampling of indoor air at the Bethpage High School campus and also intends/offered~~ have performed ~~its own~~ split sampling of the shallow groundwater at the Bethpage High School campus, and (4) initiated inquiries regarding the use of radiological materials at ~~state~~ state superfund sites in Long Island as well as ~~nine landfills~~ that may have taken waste from operations at those sites.

NYSDEC will share the results of its investigations with the EPA, other stakeholders and the public as it becomes available later this year. the EPA will continue to coordinate with NYSDEC to better understand presence of the radium in the aquifer and any potential actions that may be required to address the radium

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**From:** Obrecht, Eric R (DEC) <[eric.obrecht@dec.ny.gov](mailto:eric.obrecht@dec.ny.gov)>

**Sent:** Friday, July 28, 2017 12:04 PM

**To:** Garbarini, Doug; Rice, Timothy B (DEC)

**Cc:** Schick, Robert (DEC); Ryan, Michael (DEC); Thantu, Lorenzo; Badalamenti, Salvatore; Gomez, Karen (DEC)

**Subject:** RE: Phase 2 Radium Sampling - results

I will call you later today.

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**From:** Garbarini, Doug [<mailto:Garbarini.Doug@epa.gov>]

**Sent:** Friday, July 28, 2017 10:20 AM

**To:** Obrecht, Eric R (DEC) <[eric.obrecht@dec.ny.gov](mailto:eric.obrecht@dec.ny.gov)>; Rice, Timothy B (DEC) <[timothy.rice@dec.ny.gov](mailto:timothy.rice@dec.ny.gov)>

**Cc:** Schick, Robert (DEC) <[robert.schick@dec.ny.gov](mailto:robert.schick@dec.ny.gov)>; Ryan, Michael (DEC) <[michael.ryan@dec.ny.gov](mailto:michael.ryan@dec.ny.gov)>; Thantu, Lorenzo <[Thantu.Lorenzo@epa.gov](mailto:Thantu.Lorenzo@epa.gov)>; Badalamenti, Salvatore <[Badalamenti.Salvatore@epa.gov](mailto:Badalamenti.Salvatore@epa.gov)>

**Subject:** RE: Phase 2 Radium Sampling - results

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Hi Eric

I just wanted to check in to see whether anything has changed in the last two weeks wrt DEC issuing a fact sheet, plan or response to correspondence on this matter. If you do have something that we can reference that would help us craft our response to Senator Schumer.

Thanks

Doug

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**From:** Garbarini, Doug

**Sent:** Thursday, July 13, 2017 8:35 AM

**To:** 'Obrecht, Eric R (DEC)' <[eric.obrecht@dec.ny.gov](mailto:eric.obrecht@dec.ny.gov)>; Rice, Timothy B (DEC) <[timothy.rice@dec.ny.gov](mailto:timothy.rice@dec.ny.gov)>

**Cc:** 'Schick, Robert (DEC)' <[robert.schick@dec.ny.gov](mailto:robert.schick@dec.ny.gov)>; 'Ryan, Michael (DEC)' <[michael.ryan@dec.ny.gov](mailto:michael.ryan@dec.ny.gov)>; Thantu, Lorenzo <[Thantu.Lorenzo@epa.gov](mailto:Thantu.Lorenzo@epa.gov)>; Badalamenti, Salvatore <[Badalamenti.Salvatore@epa.gov](mailto:Badalamenti.Salvatore@epa.gov)>

**Subject:** FW: Phase 2 Radium Sampling - results

Eric/Tim

As mentioned during our 7/13/17 call, the radium data had been released to members of the NG/Navy Gw coordination group last year. Per your request I am forwarding the email that distributed the data.

I am also copying Bob per your request.

Doug

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**From:** Harrington, Jim (DEC) [<mailto:jim.harrington@dec.ny.gov>]

**Sent:** Tuesday, May 31, 2016 1:59 PM

**To:** Stan Carey <[scarey@massapequawater.com](mailto:scarey@massapequawater.com)>; 'Mike Boufis' <[mboufis@bethpagewater.com](mailto:mboufis@bethpagewater.com)>; Garbarini, Doug <[Garbarini.Doug@epa.gov](mailto:Garbarini.Doug@epa.gov)>; Fly, Lora B CIV NAVFAC MIDLANT, IPTNORTH <[lora.fly@navy.mil](mailto:lora.fly@navy.mil)>; 'Hannon, ED (AS)' <[Edward.Hannon@ngc.com](mailto:Edward.Hannon@ngc.com)>; [fkoch@sfwater.com](mailto:fkoch@sfwater.com); John Reinhardt ([johnrei@tohmail.org](mailto:johnrei@tohmail.org)) <[johnrei@tohmail.org](mailto:johnrei@tohmail.org)>

**Cc:** Schick, Robert (DEC) <[robert.schick@dec.ny.gov](mailto:robert.schick@dec.ny.gov)>; Rice, Timothy B (DEC) <[timothy.rice@dec.ny.gov](mailto:timothy.rice@dec.ny.gov)>; Papura, Thomas R (DEC) <[thomas.papura@dec.ny.gov](mailto:thomas.papura@dec.ny.gov)>; Evans, Daniel (DEC) <[daniel.evans@dec.ny.gov](mailto:daniel.evans@dec.ny.gov)>; Scharf, Steven (DEC) <[steven.scharf@dec.ny.gov](mailto:steven.scharf@dec.ny.gov)>; Swartwout, John (DEC) <[john.swartwout@dec.ny.gov](mailto:john.swartwout@dec.ny.gov)>; Wilkie, Henry (DEC) <[henry.wilkie@dec.ny.gov](mailto:henry.wilkie@dec.ny.gov)>

**Subject:** Phase 2 Radium Sampling - results

Attached are the results from the second phase of the radium sampling. We are combining it with the first phase results and trying to figure out how to present it and what it means. We resampled GM155 (the well near the plant boundary with the relatively elevated level – 8.59 pCi/l) and results are less than 5 pCi/l. Only two wells in this round exceeded 5 pCi/l and both were less than 6 pCi/l. Jim H

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Please note my new email address

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